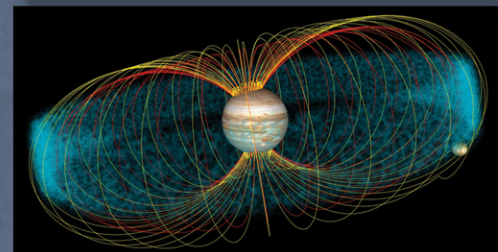
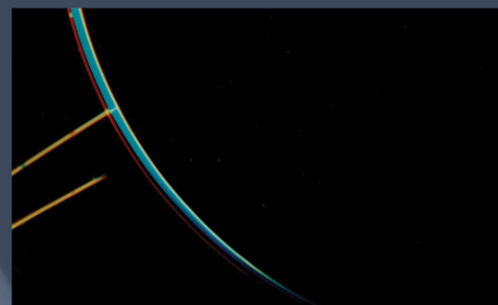
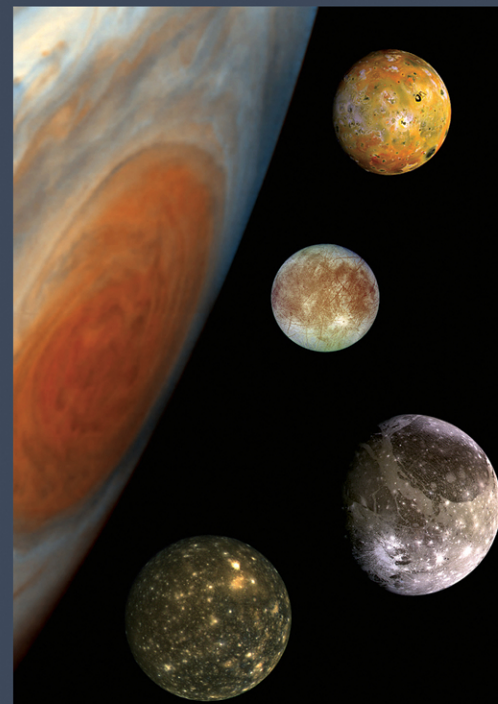


National Aeronautics and Space Administration

**Jupiter**  
**Largest**  
**Fastest**  
**Strongest**







National Aeronautics and Space Administration

	<b>Jupiter</b>	<b>Ratio (Jupiter/Earth)</b>
Mass	$1.90 \times 10^{27}$ kg	318
Volume	$1.43 \times 10^{15}$ km <sup>3</sup>	1320
Equatorial Radius	71,492 km	11.2
Gravity	24.8 m/s <sup>2</sup>	2.53
Mean Density	1330 kg/m <sup>3</sup>	0.240
Distance from Sun	$7.79 \times 10^8$ km	5.20
Orbit Period	4333 days	11.9
Orbit Velocity	13.1 km/sec	0.439
Orbit Eccentricity	0.049	2.93
Orbit Inclination	1.3 degrees	
Length of Day	9.93 hours	0.414
Axial Tilt	3.13 degrees	0.133

# Jupiter

## Largest,

## Fastest,

## Strongest

- **Composition:** Almost 90% hydrogen, 10% helium, small amounts of ammonia, methane, ethane and water
- Jupiter is the largest planet in the solar system, in fact all the other planets combined are not as large as Jupiter
- Jupiter spins faster than any other planet, taking less than 10 hours to rotate once, which causes the planet to be flattened by 6.5% relative to a perfect sphere
- Jupiter has the strongest planetary magnetic field in the solar system, if we could see it from Earth it would be the biggest object in the sky
- The Great Red Spot, a massive anticyclone in Jupiter's atmosphere, has existed for at least the last 150 years, and may have even been seen in the 1600s
- 63 moons of Jupiter have been discovered as of 2009; more will probably be found in the future
- Three of Jupiter's satellites are bigger than Earth's Moon, and Ganymede is the largest moon in the solar system, bigger than the planet Mercury
- Jupiter has a ring system, like Saturn's only much smaller and fainter, so faint that it was not discovered until the Voyager 1 flyby in 1979
- The temperature of Jupiter's atmosphere at 1 bar (Earth sea-level) pressure is about -160°F or -110°C, and wind speeds can surpass 150 meters/second (over 330 miles/hour)

### Missions that have flown by Jupiter:

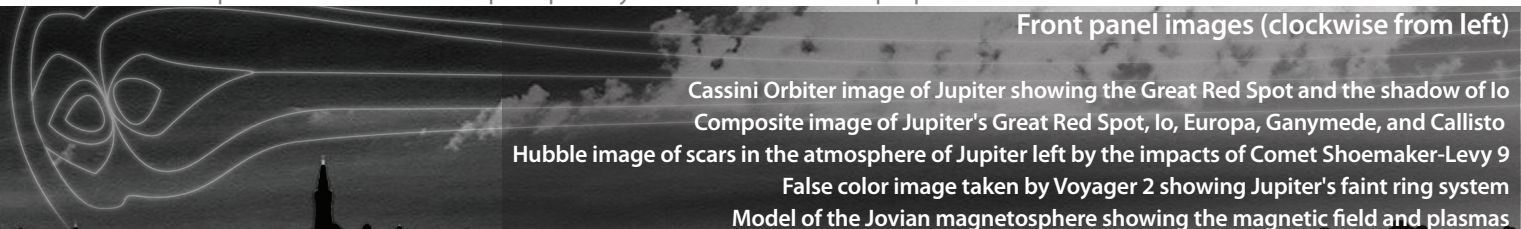
	<b>Launch</b>	<b>Flyby</b>		<b>Launch</b>	<b>Flyby</b>
Pioneer 10	3 March 1972	3 December 1973	Ulysses	6 October 1990	8 February 1992
Pioneer 11	6 April 1973	4 December 1974	Galileo	18 October 1989	7 December 1995 (went into orbit until Sept. 2003)
Voyager 1	5 September 1977	5 March 1979	Galileo Probe	18 October 1989	7 December 1995 (entered Jupiter's atmosphere)
Voyager 2	20 August 1977	9 July 1979	Cassini	15 October 1997	30 December 2000
			New Horizons	19 January 2006	28 February 2007

Juno – future mission to orbit Jupiter in ~2016

Europa-Jupiter System mission – future proposed mission

[www.nasa.gov/largest](http://www.nasa.gov/largest)

Front panel images (clockwise from left)



Cassini Orbiter image of Jupiter showing the Great Red Spot and the shadow of Io

Composite image of Jupiter's Great Red Spot, Io, Europa, Ganymede, and Callisto

Hubble image of scars in the atmosphere of Jupiter left by the impacts of Comet Shoemaker-Levy 9

False color image taken by Voyager 2 showing Jupiter's faint ring system

Model of the Jovian magnetosphere showing the magnetic field and plasmas

Combined New Horizons and Galileo images showing Io with giant volcanic plumes

**Jupiter's magnetosphere, if visible, would appear larger than the Moon**